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ABSTRACT

This workbook was designed as an easy-to-read, slower-paced text for students who have learning, reading, and language problems. As one of five workbooks to aid low achievers in problem solving, it focuses on how to use calculators to perform the computation required to solve mathematical problems. Using calculators as an aid to computation can free students to focus on the conceptual aspects of solving word problems. Questions within the text repeatedly involve the students' attention, and their learning is checked and reviewed within each lesson. Word problem situations reflect mathematical problems that students might actually meet. Worksheets to accompany the workbook are available in the teacher's guide. The six units in the workbook are entitled: Get to Know Your Calculator, How to Talk to Your Calculator, Check Yourself!, Decimals, Fractions and the Memory Keys, and The Percent Key. A page on Calculator Reminders, with specific keystrokes listed for seven processes, is also included. (MNS)

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MATH IN ACTION →

Using a CALCULATOR

ED276585

Gregg Aronson
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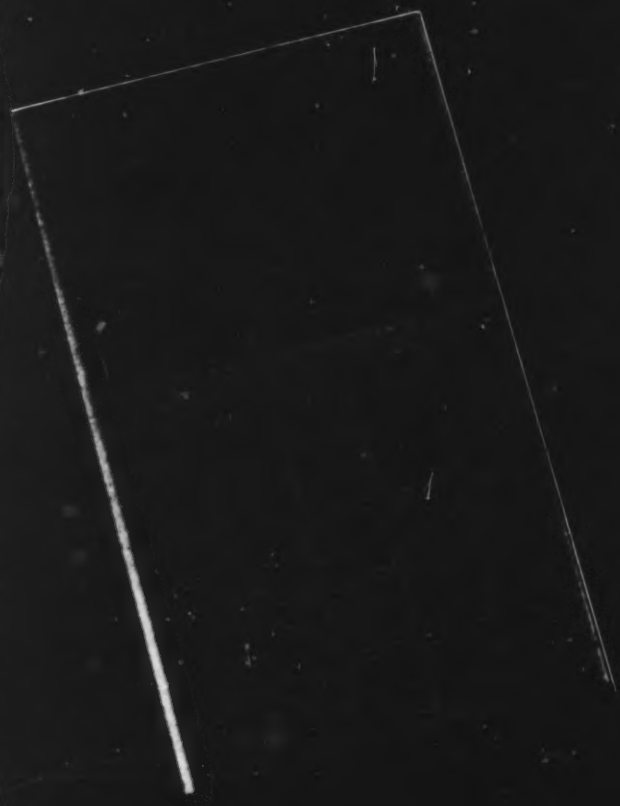

USING A CALCULATOR

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Introduction

Picture this:

You're buying groceries. You want to make sure you don't spend over $20. So each time you put something in your basket, you add its price on a piece of paper.

One hour later, you're finally finished. You get into the checkout line. You tell yourself, "There has to be a faster way to figure prices!"

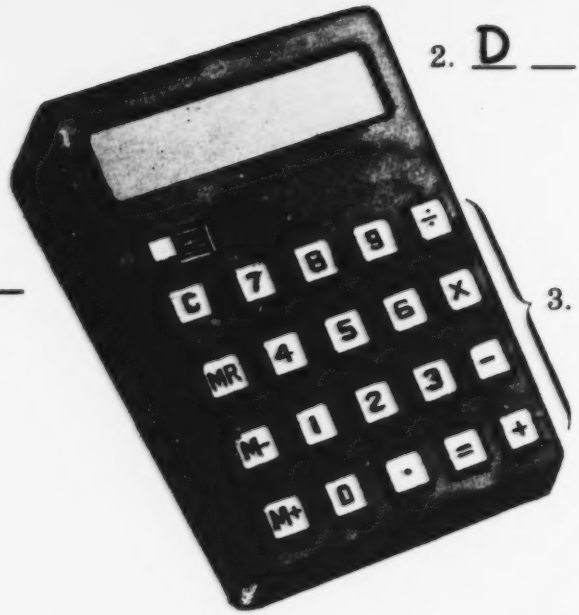
The checkout clerk adds up the prices of your groceries. You watch him quickly adding on his cash register. You tell him, "I need a machine like yours to help me add prices. Too bad they don't come small enough to fit in my pocket."

The clerk smiles. He pulls out something from his pocket. He says, "How about a *calculator*?"

That's right! A calculator can help you add prices quickly. In fact, it can help you figure many other kinds of math problems too. And it can help you easily figure with decimals, fractions, and percents.

Calculators are easy to use. This book will help you find out how. You'll learn how to do different kinds of math problems on a calculator. And you'll learn how to check your answers on it.

Then the next time you have to figure out an answer, such as a price of something, you can do it quickly on your calculator!



Unit 1

Get to Know Your Calculator

Your Calculator's Face

Put your calculator in front of you. Now look at the picture on this page. How is your calculator like the one in the picture?

_____

_____

How is it different?

_____

_____

All calculators don't look alike. Some are small and thin. Some are big and thick. But all calculators have faces. Those faces have these three main parts:

1. **A switch. Calculators must be turned on and off. Some calculators have a switch you push. Some have switches you press. How do you turn your calculator on and off?**

   _____

2. **Keys**. You press keys to operate your calculator. Keys have numbers on or by them, such as **0** and **9**. They have signs, such as **+**. They have letters, such as **C**. Count the keys on your calculator. How many keys does it have?

   _____

3. **A display**. The display shows numbers. It shows the numbers you press. And it shows answers to math problems.

☛ **Turn your calculator ON.**
What number do you see on the display? What color is the number?

Number: _____ Color: _____

☛ **Turn your calculator OFF.**

Look at the picture again. Find the three main parts of the calculator in the picture. Write *switch*, *keys*, and *display* next to those parts.

Try It Out

☛ **Turn your calculator** ON.

Look at the display. What do you see?

You should see a *zero* (**0**) and a *decimal point* (.) on the display. They tell you that your calculator is on and ready to work.

0.

- **Press** [1].

What do you see on the display?

1

- **Press** [2].

What number do you see on the display: **21** or **12**? Write the number in the display box at right.

.

- **Press** [3] [4] [5] [6] [7] [8].

Look at the display. What number is now there? Write that number in the display box.

.

- **Press** [C] **(or** [C/CE] **or** [AC] **or** [CA]**).**

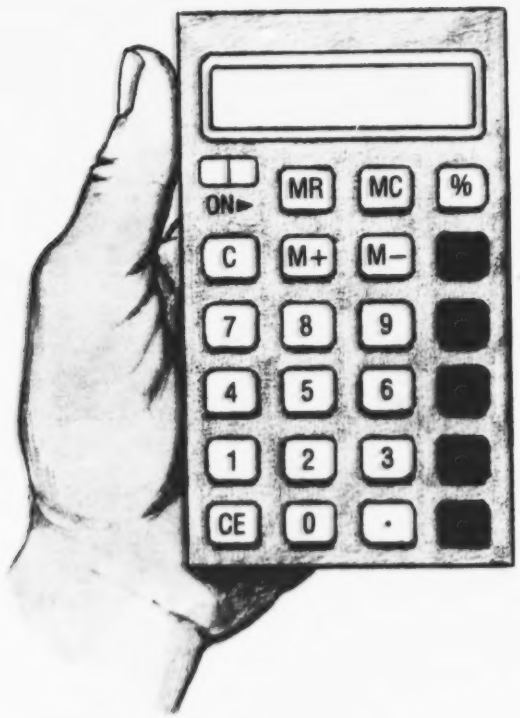
What happens to the numbers on the display?

Right! They go off the display. **C**, **C/CE**, **AC**, and **CA** all stand for *clear*. They clear (take away) the numbers you keyed in. What is now on the display? Write it in the display box.

.

☛ **Turn your calculator** OFF.

You are finished using it for now. What might happen if you *don't* turn your calculator off when you finish using it?



Operation Keys

All calculators do four math operations. They *add*, *subtract*, *multiply*, and *divide*. So, all calculators have *operation keys*. You press those keys when you want your calculator to work out a problem. How can you tell which keys are operation keys?

Right! Operation keys have operation signs on them.

Look at the picture of the calculator. Do this:

1. Find the key you press to add. Write *add* next to that key.
2. Find the key you press to multiply. Write *times* next to that key.
3. Find the key you press to subtract. Write *minus* next to that key.
4. Find the key you press to divide. Write *divided by* next to that key.
5. Find the key with an equals sign on it. Write *equals* next to it.

Suppose you are keying in a problem. You press a number key, an operation key, and another number key. Then you press the *equals key*. What shows on the display?

Right! When you press the equals key, the answer shows on the display.

Now look at your calculator. Draw a picture of its face. Show where the five operation keys are on your calculator.

Your calculator's face.

Calculator Workout

☛ **Turn your calculator ON.**

Now key in the number **8**. How many keys do you press?

Right! You press *one* key for the number 8.

- **Press [C] and clear the display.**

Now key in the number **24**. How many keys do you press?

Right again! You press *two* keys. That's because the number 24 has two *digits*. (The digits are **2** and **4**.)

- **Press [C] and clear the display.**

Key in **$5,423**. How many keys do you press?

Right! You press *four* keys. There are only four digits in that number. They are **5**, **4**, **2**, and **3**.

☛ **Turn your calculator OFF.**

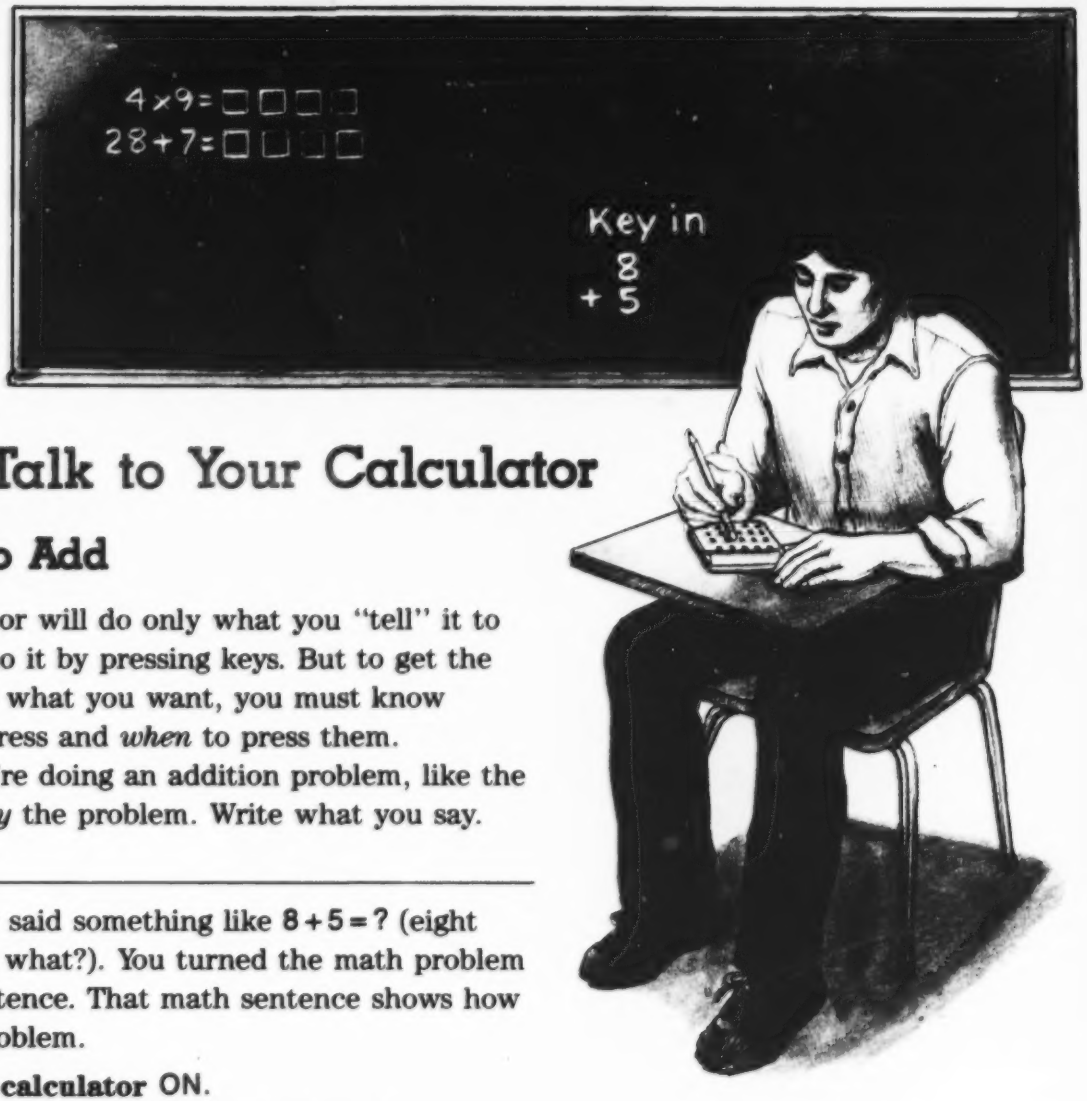
When you key in a problem, you must press a key for each digit and operation. For example, look at the math sentence below. Then look at the calculator sentence next to it. Each box stands for a key you'd press to do that problem.

Math Sentence	**Calculator Sentence**
24 + 2 =	[2] [4] [+] [2] [=]

Now write calculator sentences for the math sentences below. (Two calculator sentences have been started for you.)

1. 4 × 9 = [4] ☐ ☐ ☐
2. 28 + 7 = [2] ☐ ☐ ☐ ☐
3. 11,590 − 627 = ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
4. $674 − $200 = ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Bonus: **Turn your calculator ON.** Practice keying in each calculator sentence. Your display should show: **1.** 36. **2.** 35. **3.** 10963. **4.** 474. If you don't get those answers, press **C**, then key in the sentence again. Then **turn your calculator OFF.**



Unit 2

How to Talk to Your Calculator

Telling It to Add

Your calculator will do only what you "tell" it to do. You "talk" to it by pressing keys. But to get the calculator to do what you want, you must know *which* keys to press and *when* to press them.

Suppose you're doing an addition problem, like the one at right. *Say* the problem. Write what you say.

_____

You probably said something like **8 + 5 = ?** (eight plus five equals what?). You turned the math problem into a math sentence. That math sentence shows how to key in the problem.

☛ **Turn your calculator** ON.

Write a calculator sentence for that math sentence. Then key in the problem. Write the answer that the calculator display shows.

8 + 5 = □□□□ _____.

• **Press [C] and clear the display.**

Does it make a difference which number comes first when you add? Find out. Do the same problem on your calculator. But follow this order. Write the answer that the display shows.

5 + 8 = [5] [+] [8] [=] _____.

Did you get the same answer? You should! When you add, you can key in the numbers in any order.

☛ **Turn your calculator** OFF.

Telling It to Multiply

Look at this math problem:

$$\begin{array}{r} 21 \\ \times\ 6 \\ \hline \end{array}$$

To solve it you'd *multiply*. Now say that math problem and turn it into a math sentence. Write the sentence.

_____

Your math sentence should be something like this: **21 × 6 = ?** (twenty-one times six equals what?).

Does it matter which number you key in first? Find out. Key in the same problem these two ways. Write your answers.

☛ **Turn your calculator ON.**

1. Key in:

   21 × 6 = [2] [1] [×] [6] [=] _____.

2. **Press** [C] **and clear the display.** Key in:

   6 × 21 = [6] [×] [2] [1] [=] _____.

Did you get the same answer (126)? You should!

☛ **Turn your calculator OFF.**

Now look at these problems. Write math sentences for them. Then write calculator sentences.

	Math Sentence	Calculator Sentence	Answer
1. $306 × 7 =	_____	☐☐☐☐☐☐	2142.
2. 8,483 × 6 =	_____	☐☐☐☐☐☐☐	50898.

☛ **Turn your calculator ON.**

Practice keying in the problems. Your display should show these answers: **1. 2142. 2. 50898.** If you make a mistake, do the problem again. Remember to clear after every problem.

☛ **Turn your calculator OFF.**

Telling It to Divide

Look at this math problem: $2\overline{)8}$
To solve that problem you'd *divide*. Write that problem as a math sentence.

_____

Did you write 8 ÷ 2 = ? Or did you write 2 ÷ 8 = ? Are they both correct? Find out. Key in the problem two ways. Write the answers you get.

☛ **Turn your calculator ON.**

1. Key in:

   8 ÷ 2 = [8] [÷] [2] [=] _____.

2. **Press [C] and clear the display.** Key in:

   2 ÷ 8 = [2] [÷] [8] [=] _____

☛ **Turn your calculator OFF.**

Did you get the same answer? You should *not*. Only one math sentence gives you the right answer: 8 ÷ 2 = ? (eight *divided by* two equals what?). That's the way to key in problems when you divide: You first key in the number you are dividing. (That's usually the larger number.) You then key in the number you are dividing by.

Now look at these problems. Write math sentences. Then write calculator sentences.

	Math Sentence	Calculator Sentence	Answer
1. $9\overline{)81}$	_____	☐☐☐☐☐	_____.
2. $5\overline{)\$120}$	_____	☐☐☐☐☐☐	_____.
3. $25\overline{)1{,}000}$	_____	☐☐☐☐☐☐☐☐	_____.

☛ **Turn your calculator ON.**

Practice keying in the problems. Your display should show these answers: **1. 9. 2. 24. 3. 40.** If you make a mistake, do the problem again. Remember to clear after every problem.

☛ **Turn your calculator OFF.**

Telling It to Subtract

You learned to key in a problem a certain way when you divide. You must also key in a problem a certain way when you *subtract*.

Look at this math problem:

$$\begin{array}{r} 9 \\ -4 \\ \hline \end{array}$$

Say the problem out loud and turn it into a math sentence. Write the sentence here:

_____

Your math sentence *must* be 9 – 4 = ? (nine minus four equals what?). That's because you must key in one of the numbers first. Which number must you key in first?

_____

Right! You key in 9 first.

When you subtract, you key in numbers this way: First, key in the number you subtract *from*. (That's usually the bigger number.) Then key in the number you are *taking away*. (That's usually the smaller number.)

Now look at these problems. Write math sentences. Then write calculator sentences.

		Math Sentence	Calculator Sentence	Answer
1.	25 − 23	_____	□□□□□□	_____.
2.	$50 − 13	_____	□□□□□□	_____.
3.	1,486 − 79	_____	□□□□□□□□	_____.

☛ **Turn your calculator ON.**

Practice keying in the problems. Your display should show these answers: **1.** 2. **2.** 37. **3.** 1407. If you make a mistake, do the problem again. Remember to clear after every problem.

☛ **Turn your calculator OFF.**

Calculator Workout

Do these problems. First write a math sentence. Next, write a calculator sentence. Then key in the problem on your calculator. Write the answer you get.

☛ **Turn your calculator ON.**

	Math Sentence	Calculator Sentence	Answer
1. 18 +26	_____	☐☐☐☐☐☐	_____.
2. 25 −14	_____	C☐☐☐☐☐☐	_____.
3. 18 ×32	_____	C☐☐☐☐☐☐	_____.
4. 25 $\overline{)\$150}$	_____	C☐☐☐☐☐☐☐	_____.

Now check your answers. Your display should show: **1.** 44. **2.** 11. **3.** 576. **4.** 6. If you make a mistake, press **C**. Do the problem again.

Bonus: Do this problem on your calculator:

Chico and Mai drive a delivery truck. Today Chico drives 27 miles. Mai drives 39 miles. How many miles do they drive altogether?

27 + 39 = _____

Calculator Sentence **Answer**

☐☐☐☐☐☐ _____

☛ **Turn your calculator OFF.**

Answer: The answer is 66.

Check Yourself!

Mistake!

Suppose you press a wrong key on your calculator. You can fix that mistake by doing this: Press **CE**. (Some calculators have **C/CE** instead.) That key clears the last number or operation you keyed in.

Let's say you want to key in **22 + 11 = ?**. But you key in **22 + 12**. Press these keys and see what happens. Look at the display after you press each key. Then write the answer you get.

☛ **Turn your calculator ON.**

Press:	**You should see:**	
1. [2] [2]	22.	
2. [+]	22.	
3. [1] [2]	12.	*Mistake! Wrong number!*
4. [CE]	0.	*Mistake cleared.*
5. [1] [1]	11.	*Right number.*
6. [=]	_____.	answer

Did you get **33**? If you didn't, key in the problem again.

• **Press [C] and clear the display.**

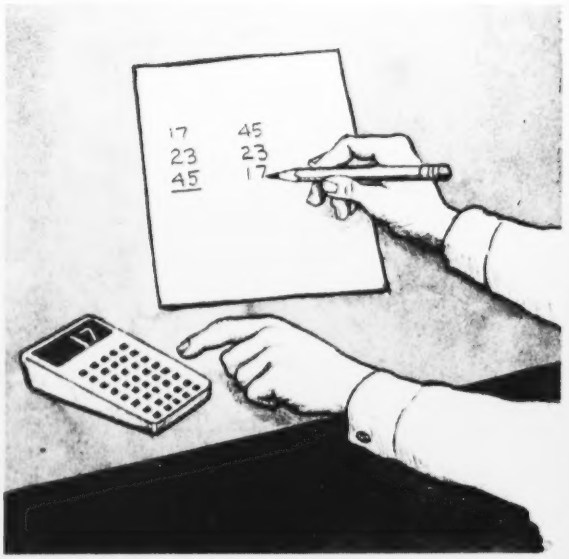
Suppose you are adding **3 + 1**. You key in the *wrong* operation. Here's what to do.

Press:	**You should see:**	
1. [3]	3.	
2. [−]	3.	*Mistake! Wrong operation!*
3. [CE]	3.	*Mistake cleared.*
4. [+]	3.	*Right operation.*
5. [1]	1.	
6. [=]	_____.	answer

The answer is **4**. If you didn't get that answer, key in the problem again.

☛ **Turn your calculator OFF.**

How to Check When You Add



Suppose you are adding. You get an answer. How can you make sure your answer is correct?

Right! You can *check* that answer.

Here's how to check when you add. First, key in the numbers and get an answer. Then, key in the numbers again in *a different order*. If you get the same answer, it is correct.

☛ **Turn your calculator ON**

Key in this problem on your calculator. Write what the display shows when you press each key.

17
23
+45

Press:

1. [1] [7] .
2. [+] .
3. [2] [3] .
4. [+] .
5. [4] [5] .
6. [=] _____ .
   answer

- **Press [C] and clear the display.**

Now check your answer. Key in the same problem in a different order. Write what the display shows when you press each key.

Press:

7. [4] [5] .
8. [+] .
9. [2] [3] .
10. [+] .
11. [1] [7] .
12. [=] _____ .
    answer check

Did you get the same answer? If you didn't, clear the display. Key in the problem again. Check it again. Keep doing that until you get the same answer.

☛ **Turn your calculator OFF.**

How to Check When You Multiply

Suppose you are doing the multiplication problem at right. Here's a way to check your answer: *Divide* your *answer* (225) by *the multiplier* (9). You should get *the number you multiply* (25).

```
  25
× 9
-----
 225  answer

      25  answer check
   9 |225
```

☛ **Turn your calculator ON.**

Key in the problem. Write what the display shows after you press each key.

25 × 9 = _____

A. **Do the problem.**

Press: 1. [2] [5] .

2. [×] .

3. [9] .

4. [=] _____ . (answer)

Do not clear the display!

B. **Check the answer.**

Press: 5. [÷] .

6. [9] .

7. [=] _____ . (answer check)

Is your answer check 25? If it isn't, clear the display. Key in the problem again and check your answer.

- **Press [C] and clear the display.**

Now look at this problem. In the boxes under **A**, write the keys you'd press to do the problem. In the boxes under **B**, write the keys you'd press to check your answer.

67 × 18 = _____

A. **Do the problem.**

Press: 1. [ ][ ] .

2. [ ] .

3. [ ][ ] .

4. [ ] _____ . (answer)

Do not clear the display!

B. **Check the answer.**

Press: 5. [ ] .

6. [ ][ ] .

7. [ ] _____ . (answer check)

Work out the problem on your calculator. Then check your answer. If your answer doesn't check out, clear the display. Key in the problem again. Check your answer again.

☛ **Turn your calculator OFF.**

How to Check When You Subtract

Look at the subtraction problem at right. How would you check the answer?

```
  27
- 13
----
  14  answer
```

Here's one way: *Add* 14 and 13. You will get 27. In other words: Add *the answer* and *the number you subtract*. If the answer is correct, you'll get *the number you subtracted from*.

```
  14
+ 13
----
  27  answer check
```

☛ **Turn your calculator ON.**

Key in this problem. Write what the display shows when you press each key.

256 – 235 = _____

A. **Do the problem.**

Press: 1. [2] [5] [6] .

2. [–] .

3. [2] [3] [5] .

4. [=] _____ .
answer

Do not clear the display!

B. **Check the answer.**

Press: 5. [+] .

6. [2] [3] [5] .

7. [=] _____ .
answer check

If your answer is correct, your answer check will be 256. If it isn't, clear the display and key in the problem again.

- **Press [C] and clear the display.**

Now look at this problem. In the boxes, write the keys you'd press.

8,832 – 529 = _____

A. **Do the problem.**

Press: 1. [ ][ ][ ][ ] .

2. [ ] .

3. [ ][ ][ ] .

4. [ ] _____ .
answer

Do not clear the display!

B. **Check the answer.**

Press: 5. [ ] .

6. [ ][ ][ ] .

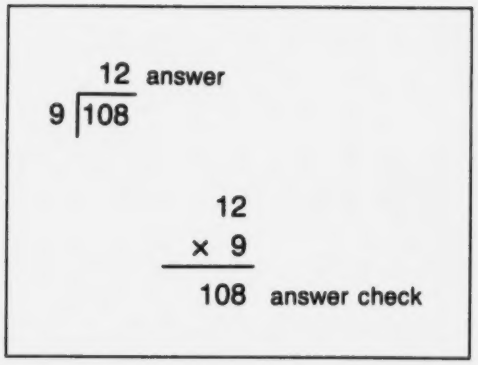
7. [ ] _____ .
answer check

Key in the problem and check your answer. Write what shows when you press each key. Your answer check should be 8832. If it isn't, clear the display. Do the problem again.

☛ **Turn your calculator OFF.**

How to Check When You Divide

Look at the division problem at right. How would you check the answer?



Here's how: Multiply 12 by 9. You will get 108. In other words: Multiply *the answer* by *the divisor*. (The divisor is the number you divide by.) If your answer is correct, you'll get *the number you divided*.

☛ **Turn your calculator ON.**

Key in the problem below. Write what the display shows when you press each key.

450 ÷ 25 = _____

A. **Do the problem.**

Press: 1. [4] [5] [0] .

2. [÷] .

3. [2] [5] .

4. [=] _____ .
answer

Do not clear the display!

B. **Check the answer.**

Press: 5. [×] .

6. [2] [5] .

7. [=] _____ .
answer check

Your answer check should be 450. If it isn't, clear the display. Key in the problem again.

• **Press [C] and clear the display.**

Now look at this problem. In the boxes, write the keys you'd press.

728 ÷ 13 = _____

A. **Do the problem.**

Press: 1. [ ][ ][ ] .

2. [ ] .

3. [ ][ ] .

4. [ ] _____ .
answer

Do not clear the display!

B. **Check the answer.**

Press: 5. [ ] .

6. [ ][ ] .

7. [ ] _____ .
answer check

Key in the problem and check your answer. Write what shows when you press each key. If your answer check is *not* 728, clear the display. Key in the problem again.

☛ **Turn your calculator OFF.**

Calculator Workout

Write the keys you'd press to do and check these problems. Then key in the problems. Write what shows when you press a key. If your answers don't check out, clear the display. Key in the problems again.

☛ **Turn your calculator ON.**

1. 9 + 69 = _____

   A. 1. ☐ .
   2. ☐ .
   3. ☐☐ .
   4. ☐ _____ .
   answer

   B. 5. C 0.
   6. ☐☐ .
   7. ☐ .
   8. ☐ .
   9. ☐ _____ .
   answer check

2. 20 × 28 = _____

   A. 1. C .
   2. ☐☐ .
   3. ☐ .
   4. ☐☐ .
   5. ☐ _____ .
   answer

   Do not clear the display!

   B. 6. ☐ .
   7. ☐☐ .
   8. ☐ _____ .
   answer check

3. 51 − 17 = _____

   A. 1. C .
   2. ☐☐ .
   3. ☐ .
   4. ☐☐ .
   5. ☐ _____ .
   answer

   Do not clear the display!

   B. 6. ☐ .
   7. ☐☐ .
   8. ☐ _____ .
   answer check

4. 252 ÷ 12 = _____

   A. 1. C .
   2. ☐☐☐ .
   3. ☐ .
   4. ☐☐ .
   5. ☐ _____ .
   answer

   Do not clear the display!

   B. 6. ☐ .
   7. ☐☐ .
   8. ☐ _____ .
   answer check

☛ **Turn your calculator OFF.**

Unit 4

Decimals

Keying In Decimals

☛ **Turn your calculator ON.**
What does the display show?

Right! The display shows a zero (**0**) and a *decimal point* (**.**).

- **Now press** [5].
  What does the display show?

Right again! The display shows the number **5** and a decimal point. Every time you key in a *whole* number, this happens: The display shows the number and a decimal point behind that number.

Suppose you want to key in a decimal such as .25. How would you do that?

Yes. First press the key that has a decimal point. Then key in 25.

- **Press** [C] **and clear the display.**

Press the keys shown below. Write what the display shows when you press each key. Be sure to show the decimal point.

1. [.] [2] [5]
2. [C] [1] [.] [2] [5]
3. [C] [.] [0] [5]

☛ **Turn your calculator OFF.**

Figuring with Decimals

Did you know this? You use decimals *every day* in real life. You use decimals whenever you use *money*.

When you use a calculator to figure dollars and cents, you key in those amounts as decimals. For example, one dollar and twenty-five cents ($1.25) is 1.25. And five cents (5¢ or $.05) is .05. (You *don't* key in the dollar or cent sign.)

Look at the amounts below. How would you key them in? Write the keys you'd press. (The first two are done.)

1. 25¢ [.] [2] [5]
2. 1¢ [C] [.] [0] [1]
3. $.05 [C] [ ] [ ] [ ]
4. 9¢ [C] [ ] [ ] [ ]
5. $2.40 [C] [ ] [ ] [ ] [ ]
6. $180.50 [C] [ ] [ ] [ ] [ ] [ ] [ ]

☛ **Turn your calculator ON.**

Key in the amounts above. Write what shows on the display when you press each key. Your display should show: **1.** 0.25 **2.** 0.01 **3.** 0.05 **4.** 0.09 **5.** 2.40 **6.** 180.50. (If you don't get an answer, key in the amount again.)

- **Press [C] and clear the display.**

Write the keys you'd press to do and check this problem.

$15.25 – 8.50 = _____

A. 1. [ ] [ ] [ ] [ ] [ ]
2. [ ]
3. [ ] [ ] [ ] [ ]
4. [ ]

_____ answer

B. 5. [ ]
6. [ ] [ ] [ ] [ ]
7. [ ]

_____ answer check

Don't clear the display!

Key in the problem and check your answer. Write what the display shows when you press each key. Your answer check should be 15.25. If it isn't, clear the display. Key in the problem again.

☛ **Turn your calculator OFF.**

Reading Decimal Answers

☛ **Turn your calculator ON.**

Key in this problem: 12.75 ÷ 3 = ? What answer do you get?

Did you get 4.25? Notice this: There are *two digits* behind the decimal point. Now say 4.25 out loud. Write the words you say here:

You probably said "four *point* two five," or "four *point* twenty-five." Or you may have said "four and twenty-five hundredths." Those are all ways to read decimals that have two digits behind the decimal point.

- **Press C and clear the display.**

Now key in this problem: 17 ÷ 9 = ? What answer do you get?

You should get 1.8888888. How many digits are behind the decimal point? (Count them.)

☛ **Turn your calculator OFF.**

When we divide and multiply with a calculator, this may happen: We get answers that have *many* digits behind the decimal point. To read those answers we do this: Change them so only *two* digits are behind the decimal point. We do that by *rounding to the nearest hundredth.*

Here's how to round to the nearest hundredth. Start from the decimal point and count right, to the *second* digit. Look at the third digit, next to it.

- If the third digit is the number 5 or more, do this: Change the *second* digit to the next highest number. Then drop all the digits behind it. For example:

  2.4668 ⟶ 2.47

- If the third digit is less than 5, do this: Don't change the second digit. Just drop all the digits behind it. For example:

  2.4646 ⟶ 2.46

Now round these decimals to the nearest hundredth. Then check your answers.

1. 1.8888888 ⟶ _____
2. 2.0516 ⟶ _____
3. 10.333333 ⟶ _____
4. 500.1955 ⟶ _____

Answers: 1. 1.89 2. 2.05 3. 10.33 4. 500.20

Calculator Workout

☛ **Turn your calculator ON.**

Write the keys you'd press to do and check these problems. Then key in the problems and check them. (If your answers don't check out, clear the display. Key in the problems again.) Some answers will have more than two digits behind the decimal point. Round those answers to the nearest hundredth.

1. $52.34 + 30.57 = _____

   A. 1. ☐☐☐☐☐
   2. ☐
   3. ☐☐☐☐☐
   4. [=] _____ answer

   B. 5. [C]☐☐☐☐☐
   6. ☐
   7. ☐☐☐☐☐
   8. [=] _____ answer check

2. 9¢ × 6.05 = _____

   A. 1. [C]☐☐☐
   2. ☐
   3. ☐☐☐☐
   4. [=] _____ answer

   _____ nearest hundredth

   Do not clear the display!

   B. 5. ☐
   6. ☐☐☐☐
   7. [=] _____ answer check

3. 5 − 1.38 = _____

   A. 1. [C]☐
   2. ☐
   3. ☐☐☐☐
   4. [=] _____ answer

   Do not clear the display!

   B. 5. ☐
   6. ☐☐☐☐
   7. [=] _____ answer check

4. $4211.60 ÷ 12 = _____

   A. 1. [C]☐☐☐☐☐☐☐
   2. ☐
   3. ☐☐
   4. [=] _____ answer

   _____ nearest hundredth

   Do not clear the display!

   B. 5. ☐
   6. ☐☐
   7. [=] _____ answer check

   _____ nearest hundredth

☛ **Turn your calculator OFF.**

Unit 5

Fractions and the Memory Keys

Keying In Fractions

Suppose you're figuring how much time you spent doing a job. You write: $\frac{3}{4}$ hour, $\frac{1}{2}$ hour, and $\frac{1}{4}$ hour. Now you must add those fractions. You can easily add them on your calculator. But first, you must *change* the fractions to something else. What do you think you change the fractions to?

_____

Right! You change the fractions to *decimals*.

Here's how to change fractions to decimals: *Divide the top number of the fraction by the bottom number.*

☛ **Turn your calculator ON.**

Change these fractions to decimals. Press the following keys. Then write the decimals you see on the display.

1. $\frac{3}{4}$ [3] [÷] [4] [=] _____
2. $\frac{1}{2}$ [C] [1] [÷] [2] [=] _____
3. $\frac{1}{4}$ [C] [1] [÷] [4] [=] _____

You should get these answers: **1.** 0.75 **2.** 0.5 **3.** 0.25. If you didn't get those answers, clear the display. Key in the problems again.

- **Press [C] and clear the display.**

Now look at these fractions. Write the keys you'd press to turn them into decimals. Then work them out on your calculator. Write the decimals you see on the display.

1. $\frac{2}{5}$ [ ] [ ] [ ] [ ] _____
2. $\frac{4}{5}$ [C] [ ] [ ] [ ] [ ] _____
3. $\frac{3}{5}$ [C] [ ] [ ] [ ] [ ] _____
4. $\frac{1}{5}$ [C] [ ] [ ] [ ] [ ] _____

☛ **Turn your calculator OFF.**

Bonus: All the fractions on this page are used a lot. Memorize their decimal forms.

Keying In Mixed Numbers

Some problems have *mixed numbers*, such as $1\frac{3}{4}$. What is a mixed number?

_____

Right! A mixed number is a whole number and a fraction.

You can do a problem with mixed numbers on your calculator. But first, you must change them to *mixed decimals*. (A mixed decimal is a whole number and a decimal.) Here's how: Key in the fraction as a decimal, then add the whole number to it.

☛ **Turn your calculator ON.**

Press these keys. Write what shows on the display.

$1\frac{3}{4}$ [3] [÷] [4] [+] [1] [=] _____ mixed decimal

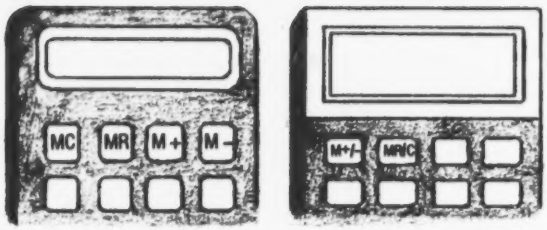
You should see 1.75 on the display. If you don't, clear the display. Press the keys again until you get the right mixed decimal.

Now look at these mixed numbers. What keys should you press to turn them into mixed decimals? Finish writing them.

1. $4\frac{1}{4}$ [C] [1] [÷] [4] [+] [ ] [=] _____
2. $7\frac{3}{5}$ [C] [ ] [÷] [ ] [+] [7] [=] _____
3. $3\frac{4}{5}$ [C] [4] [ ] [5] [ ] [3] [ ] _____
4. $9\frac{1}{3}$ [C] [ ] [ ] [ ] [ ] [ ] [ ] _____
5. $10\frac{1}{6}$ [C] [ ] [ ] [ ] [ ] [ ] [ ] [ ] _____
6. $200\frac{2}{3}$ [C] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] _____

Now press the keys. Write what shows on the display. You should get these mixed decimals: **1.** 4.25 **2.** 7.6 **3.** 3.8 **4.** 9.3333333 **5.** 10.166666 **6.** 200.66666. If you don't get a right answer, clear the display. Press the keys again until you do.

☛ **Turn your calculator OFF.**



Using Memory

Most calculators can "remember" numbers. They do that when you press their *memory keys*. (Memory keys have the letter **M** on them.) Calculators may have two, three, or four memory keys.

☛ **Turn your calculator** ON.

You can use memory to do problems with mixed numbers. Find out how to add or divide. Key in this problem. Write what shows on the display.

$1\frac{3}{4} + 7\frac{4}{5} =$ _____

1. Change the second mixed number:

   [4] [÷] [5] [+] [7] [=]

2. Put the mixed decimal into memory:

   [M+]

3. Clear the display:

   [C]

4. Change the first mixed number:

   [3] [÷] [4] [+] [1] [=]

5. Press the operation key:

   [+]

6. Bring back the mixed decimal:

   [MR]

7. Find the answer:

   [=]

_____
answer

Your answer should be **9.55**. If it isn't, press **MC** two times. Next, clear the display. Key in the problem again.

Memory Keys

[M+] and [M–] put numbers into the calculator's memory. (We'll only be using M+ in this book.)

[MR] (*memory recall*) brings a number back on the display.

[MC] (*memory clear*) clears, or wipes out, a number from the calculator's memory.

• **Press [MC] two times. Press [C].**

Now use the memory keys and key in this problem. Write the keys you press. Write what shows on the display.

$3\frac{1}{4} \div 2\frac{1}{2} =$ _____

1. Change the *second* mixed number:

   ☐☐☐☐☐☐

2. Put the mixed decimal into memory:

   ☐

3. Clear the display:

   ☐

4. Change the *first* mixed number:

   ☐☐☐☐☐☐

5. Press the operation key:

   ☐

6. Bring back the mixed decimal:

   ☐

7. Find the answer:

   ☐

_____
answer

Your answer should be **1.3**. If it isn't, press **MC** two times. Clear the display. Key in the problem again.

☛ **Turn your calculator** OFF.

Calculator Workout

☛ **Turn your calculator ON.**

1. Change these fractions into decimals. Write the keys and answers.

   a. $\frac{2}{5}$ ☐☐☐[=] _____

   b. $\frac{3}{4}$ [C]☐☐☐☐ _____

   c. $\frac{2}{3}$ [C]☐☐☐☐ _____

2. Change these mixed numbers into mixed decimals. Write the keys and answers.

   a. $6\frac{4}{5}$ [C]☐☐☐☐☐[=] _____

   b. $12\frac{1}{3}$ [C]☐☐☐☐☐☐☐ _____

3. Use the memory keys to do these problems. Round your answers to the nearest hundredth if you need to.

   A. $6\frac{3}{4}+21\frac{3}{5}=$ _____

   1. [C]☐☐☐☐☐☐[=]
   2. ☐
   3. ☐
   4. ☐☐☐☐☐[=]
   5. ☐
   6. ☐
   7. ☐ _____ answer

   B. $10\frac{1}{3}\times 2\frac{5}{6}=$ _____

   1. [MC][MC][C]
   2. ☐☐☐☐☐[=]
   3. ☐
   4. ☐
   5. ☐☐☐☐☐☐[=]
   6. ☐
   7. ☐
   8. ☐ _____ answer

   C. $20\frac{1}{3}-5\frac{1}{2}=$ _____

   1. [MC][MC][C]
   2. ☐☐☐☐☐☐
   3. ☐
   4. ☐
   5. ☐☐☐☐☐☐☐
   6. ☐
   7. ☐
   8. ☐ _____ answer

   D. $20\frac{2}{5}\div 4\frac{1}{5}=$ _____

   1. [MC][MC][C]
   2. ☐☐☐☐☐☐
   3. ☐
   4. ☐
   5. ☐☐☐☐☐☐☐
   6. ☐
   7. ☐
   8. ☐ _____ answer

☛ **Turn your calculator OFF.**

Unit 6

The Percent Key

Finding Percents

Picture this: You're in a store that's having a sale. You see this sign: *Shirts 20% off regular price*. The regular price is $12.50. You wonder: *How much less is the sale price?* To find out, you must figure out 20% of $12.50.

Your calculator has a percent key that can help you figure percents. Look at your calculator. Find the key with the percent sign on it.

☛ **Turn your calculator ON.**

Press these keys and find the answer to the problem.

20% of $12.50 = _____

1. First, key in the amount: [1] [2] [.] [5] [0]
2. Press the key to multiply: [×]
3. Key in the percent: [2] [0]
4. Press the percent key: [%] _____ answer

You should see the answer when you press the percent key. Is it 2.5 ($2.50)? If it isn't, clear the display. Key in the problem again.

- **Press [C] and clear the display.**

Now look at this problem. Write the keys you'd press to find the answer.

25% of $35 = _____

1. First, key in the amount: [ ] [ ]
2. Press the key to multiply: [ ]
3. Key in the percent: [ ] [ ]
4. Press the percent key: [ ] _____ answer

Now key in the problem. Your answer should be 8.75 ($8.75). If it isn't, clear the display. Key in the problem again.

☛ **Turn your calculator OFF.**

How Much Less? How Much More?

You see a coat on sale at 25% off. The regular price is $60. *How much is the sale price? To find out, you must figure out* $60 – 25% of $60. Here's a way many calculators figure the answer. Does your calculator work like this? Find out.

☛ **Turn your calculator ON.**

Key in the problem. Write what shows when you press each key.

$60 – 25% = _____

1. Key in the amount: [6] [0]
2. Press the *minus* key: [–]
3. Key in the percent: [2] [5]
4. Press the *percent* key: [%] _____
5. Press the *equals* key: [=] _____

The answer is 45. ($45). Which key gives you the answer: the *percent* or the *equals* key?

_____

After the sale, prices will go up. You see a sign: *30% more after sale*. If the sale price is $25, *how much will it be after the sale*? To find out, you must figure out $25 + 30% of $25.

• **Press [C] and clear the display.**

Find the answer to the problem. Write the keys you'd press. Then key in the problem.

$25 + 30% = _____

1. Key in the amount: [ ] [ ]
2. Press the *plus* key: [ ]
3. Key in the percent: [ ] [ ]
4. Press the *percent* key: [ ] _____
5. Press the *equals* key: [ ] _____

What's the answer?

_____

☛ **Turn your calculator OFF.**

What's the Percent? What's the Amount?

☛ **Turn your calculator ON.**

Sometimes you know a number and an amount. But you don't know *what percent* the number is of that amount. For example: 2 is _____% of 40? To get the answer you'd *divide*. Write the keys you press to do the problem. Then key in the problem.

2 is _____% of 40? (2 ÷ 40 = _____%)

1. Key in the smaller amount: ☐
2. Press the key to divide: ☐
3. Key in the larger amount: ☐☐
4. Press the *percent* key: ☐ _____ answer

Did you get 5. (5%)? If you didn't, clear the display. Key in the problem again.

- **Press C and clear the display.**

Now key in this problem. Your answer should be 20%. If it isn't, press C and key in the problem again.

60 is _____% of 300?

- **Press C and clear the display.**

Sometimes you know that a number is a certain percent of an amount. But you don't know *what amount*. For example: 4 is 25% of _____? To get that amount, you'd also *divide*. Write the keys you press to do the problem.

4 is 25% of _____? (4 ÷ 25% = amount)

1. Key in the number: ☐
2. Press the key to divide: ☐
3. Key in the percent: ☐☐
4. Press the percent key: ☐ _____ answer

Did you get 16? If you didn't, clear the display. Key in the problem again.

- **Press C and clear the display.**

Key in this problem. Your answer should be 50. If it isn't, press C. Key in the problem again.

15 is 30% of _____?

☛ **Turn your calculator OFF.**

Calculator Workout

☛ **Turn your calculator ON.**

Work out these problems. First, write the keys you press. Then write the answers. (For help, look at the page listed after each problem.)

1. You borrow **$480**. You promise to pay **25%** of it by a certain date. How much is **25%**? (See page 27.)
   25% of $480 = _____

   1. [C] [ ] [ ] [ ]
   2. [ ]
   3. [ ] [ ]
   4. [ ] _____ answer

2. The regular price of towels is **$11.50**. The sale price is **30%** less. How much is the sale price? (See page 28.)
   $11.50 − 30% = _____

   1. [C] [ ] [ ] [ ] [ ] [ ]
   2. [ ]
   3. [ ] [ ]
   4. [ ] _____
   or 5. [ ] _____

   Write the answer only.

3. You put **$400** in a savings account. The bank pays you **5%** interest on it, and adds it to your account. How much money do you now have? (See page 28.)
   $400 + 5% = _____

   1. [C] [ ] [ ] [ ]
   2. [ ]
   3. [ ]
   4. [ ] _____
   or 5. [ ] _____

   Write the answer only.

4. A band saw is **$30** cheaper during a sale. The regular price is **$120**. **$30** is what percent off? (See page 29.)
   $30 is _____ **% of $120.**

   1. [C] [ ] [ ]
   2. [ ]
   3. [ ] [ ] [ ]
   4. [ ] _____ answer

5. You buy a used car. You will pay **$150** every month. That's **20%** of the whole price. How much is the whole price? (See page 29.)
   $150 is 20% of _____

   1. [C] [ ] [ ] [ ]
   2. [ ]
   3. [ ] [ ]
   4. [ ] _____ answer

☛ **Turn your calculator OFF.**

Calculator Reminders

How to Key In Some Operations

1. Change a fraction to a decimal:
   $\frac{1}{4} \longrightarrow .25$
   [1] [÷] [4] [=] .25

2. Key in a mixed number:
   $1\frac{1}{4} \longrightarrow 1.25$
   [1] [÷] [4] [+] [1] [=] 1.25

3. Find how much a percent is:
   20% of 100 = _____
   [1] [0] [0] [×] [2] [0] [%] 20.
   or [1] [0] [0] [×] [2] [0] [%] [=] 20.

4. Find an amount when a percent is taken off:
   100 − 20% = _____
   [1] [0] [0] [−] [2] [0] [%] or [=] 80.
   or [1] [0] [0] [×] [2] [0] [%] [−] [=] 80.

5. Find an amount when a percent is added:
   100 + 20% = _____
   [1] [0] [0] [+] [2] [0] [%] or [=] 120.
   or [1] [0] [0] [×] [2] [0] [%] [+] [=] 120.

6. Find a percent of an amount:
   40 is _____% of 80
   [4] [0] [÷] [8] [0] [%] 50.
   or [4] [0] [÷] [8] [0] [%] [=] 50.

7. Find a total amount:
   40 is 50% of _____
   [4] [0] [÷] [5] [0] [%] 80.
   or [4] [0] [÷] [5] [0] [%] [=] 80.

Calculator Hints

- Clear the display before you key in a problem.
- Look at the display when you press each key.
- Key in a problem the same way you say it.
- Write down the answer.
- Check your answer.
- Turn the calculator off when you finish using it.

Congratulations!

You now understand how to use a calculator. You know how to add, subtract, multiply, and divide on it. You also know how to:

- key in decimals and fractions;
- figure with percents; and
- use the memory keys.

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